

FOR FREE DISTRIBUTION



GENERAL KNOWLEDGE FOR CLASS II

2



SINDH TEXTBOOK BOARD

Printed by
PARAMOUNT PRINTING PRESS,
HYDERABAD.

All rights reserved with Sindh Textbook Board, Jamshoro.

Prepared and developed by the Sindh Textbook Board, Jamshoro
with the collaboration of Wali Muhammad Institute of Education.

Reviewed by the Bureau of Curriculum, Jamshoro.

Approved by the Education and Literacy Department, Government of Sindh,
vide letter No. SO(G-1)E&L/Curriculum-2014, dated 20-03-2014
for the students of Class-II, Province of Sindh.

Chief Co-ordinator

Agha Sohail Ahmed
Chairman, Sindh Textbook Board

Written by:

Prof. Dr. Bernadette L. Dean
Ms. Shabnam Khan
Ms. Oroosa Hafeez
Ms. Attia Naz
Ms. Kanwal Zahid

Reviewers:

Dr. Manzoor-ul-Haque Arain
Prof. Dr. Bernadette L. Dean
Mr. Muhammad Bux Khokhar
Mr. Qaimuddin Bilal
Mr. Muhammad Natiq Memon
Mr. Arif Ali Lodhi
Mr. Tanveer Ahmed Khan
Dr. Khalil Ahmed Korai

Supervised by

Ali Muhammad Sahar
Abdul Wadood

Layout

Muhammad Imran

Printed at: Paramount Printing Press, Karachi.

TABLE OF CONTENTS

Unit 1: The Blessings of Almighty Allah		
Chapter 1	The blessings of Almighty Allah	2
Chapter 2	Fasting	4
Chapter 3	Religious Festivals	6
Unit 2: Our Country		
Chapter 1	Our Country Pakistan	13
Chapter 2	Our Flag	15
Chapter 3	Quaid-i-Azam	17
Chapter 4	The Government	19
Unit 3: Villages and Cities		
Chapter 1	Village Life	24
Chapter 2	How Things have changed overtime in a village	29
Chapter 3	City life	31
Chapter 4	The work people do	35
Chapter 5	Caring for each other	40
Unit 4: Our Rights and Responsibilities		
Chapter 1	We are all born equal in dignity and respect	47
Chapter 2	Our rights and our responsibilities	51
Chapter 3	For giving others	54
Unit 5: Earth and its Resources		
Chapter 1	Our Earth, our Environment	64
Chapter 2	Natural Resources	67
Unit 6: The Land Resources		
Chapter 1	The Land	71
Chapter 2	The Plains	73
Chapter 3	Mountains	74
Chapter 4	Forest	75
Chapter 5	Land Problems and what we can do	77

Unit 7: The Water and its Resources

Chapter 1	Water	83
Chapter 2	How do we get water at our home?	86
Chapter 3	The importance of water	88
Chapter 4	Use water carefully	90

Unit 8: Plants and their Parts and Functions

Chapter 1	Plants around us	94
Chapter 2	Parts of plants and their functions	95

Unit 9: Things around us Plants and Animals

Chapter 1	Animals around us	113
Chapter 2	The places animals live in	114
Chapter 3	Animal homes	117
Chapter 4	Animals and their babies	121

Unit 10: Use of the Earth's Resources

Chapter 1	Using the Earth's Resources to meet our needs	131
Chapter 2	Farming	133
Chapter 3	Materials and tools used to build	137

Unit 11: Heat and Light

Chapter 1	Heat	150
Chapter 2	Light	154

Unit 12: Developing a Good Character

Chapter 1	Learning from the Life and Teachings of the Prophets	161
Chapter 2	Being Fair	167
Chapter 3	Helping others	168

Unit 1: The Blessings of Almighty Allah

Students Learning Outcomes (SLOs)

By the end of this unit students will be able to:

Chapter 1: The Blessings of Almighty Allah

- Recognize that Almighty Allah gives us innumerable blessings/bounties (home, family, food, etc.).
- Recognize that everyone should thank Almighty Allah for His blessings/bounties.
- Recite brief connotations in Arabic that Muslims use in daily life with their meanings
(Insha Allah, Masha Allah, Al hamd u lillah, Yarhamuk Allah).

Chapter 2: Fasting

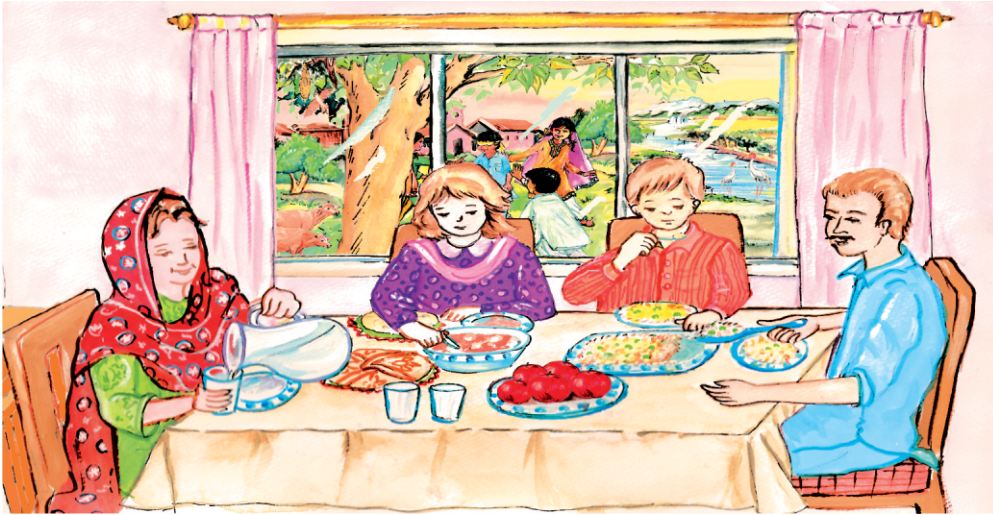
- Recognize the importance of fasting for people of all faiths.
- Recognize that people of all faiths fast at different times of the year.
- Recognize that Ramazan is the month of fasting for Muslims.
- Identify what Muslims do during the month of Ramazan.

Chapter 3: Religious Festivals

- Describe how people celebrate Eid-ul-Fitr and Eid-ul-Azha.
- Identify other cultural and religious festivals celebrated in their village/city.

CHAPTER 1**THE BLESSINGS OF ALMIGHTY ALLAH**

Almighty Allah created us. He loves us. He has blessed us in many ways. The air we breathe, the water we drink and the food we eat are all His blessings. The materials we use to build our homes and our family that we live with, are also His blessings.



The blessings of Almighty Allah

ACTIVITY

- Some of the blessings of Almighty Allah are given in column A. In column B, write how we use them.

Column A Blessing of Almighty Allah	Column B Uses
(i) Air	
(ii) Animals	
(iii) Sun	
(iv) Plants	
(v) Water	

Teacher's Note Ask students to do the things in the background. Promote observation, explore and communicate.

Fill in the blanks. Use the word box to help you.

Insha Allah

MashaAllah

Alhamdulillah

YarhamukAllah

SubhanAllah

- (i) When a Muslim plans to do something, he says _____ .
- (ii) When a Muslim hears or sees something good, he says _____
- (iii) Muslims thank Allah by saying _____ .
- (iv) When a Muslims sneezes, he says _____ .
- (v) Muslims praise Allah by saying _____ .

Teacher's Note Tell children that Muslims say Insha Allah which means Almighty Allah-willing when speaking about future plans and events. Masha Allah which means as Almighty Allah willed on hearing good news. Subhan Allah which means glory be to Almighty Allah, to affirm Allah's perfection. Yarhamuk Allah which means may Almighty Allah have mercy on you, when someone sneezes. Muslims thank Almighty Allah by saying Alhamdulillah.

CHAPTER 2

FASTING

Fasting is important religious activity. The followers of most religions fast. They fast at different times of the year. Fasting means to give up eating and drinking for Almighty Allah. It is also a time of prayer and a time to do good deeds to help the poor and needy.

Fasting teaches us many good things. It teaches us patience. It helps us to understand the feelings of those who do not get enough food to eat.



A poor woman receiving things of daily need during the month of Ramazan

ACTIVITY

Answer the following questions:

- (i) What does fasting mean?
- (ii) List three things which we learn through fasting.

- (i) _____
- (ii) _____
- (iii) _____

Do you know?

Muslims fast during the month of Ramazan.

Christians fast during Lent.

Jews fast on Yom Kippur and Tisha B'av

Hindus fast during religious festivals such as Maha Shivaratri and just before Diwali.

Muslims fast during the month of Ramazan. They fast from sunrise to sunset. Before sunrise they eat Sehri and then begin their fast. At sunset they end their fast by eating Iftari.



A Muslim family at Iftar

They recite the Holy Quran regularly during the month of Ramazan.

Taraveeh is the special prayer offered by Muslims during Ramazan.



Muslims offering Taraveeh

ACTIVITY

Answer the following questions:

1. When do Muslims, Christians and Hindus fasting?
 - i) Muslims fast in the month of _____.
 - ii) Christians fast in _____.
 - iii) Hindus fast in _____.
2. Muslims begin their fast by eating _____.
3. Muslims end their fast by eating _____.
4. The special prayer offered by Muslims during Ramazan is called _____.

CHAPTER 3

RELIGIOUS FESTIVALS

Religious festivals are celebrations of religious events every year.

Muslims celebrate Eid-ul-Fitr and Eid-ul-Azha.



A Muslim family celebrating Eid-ul-Fitr

Christians celebrate Christmas and Easter.



A Christian family celebrating Christmas

Jews celebrate Hanukkah and Passover.



A Jewish family celebrating Hanukkah

Hindus celebrate Diwali and Holi.



A Hindu family celebrating Diwali

Eid-ul-Fitr

Eid-ul-Fitr is celebrated on the first day of Shawal after the fasting month of Ramazan. It is a day of happiness. Muslims prepare for Eid by decorating their homes. They make new clothes and buy new shoes. They give *Fitra* to the poor and needy so they can also enjoy Eid.

On Eid day, they wear new clothes and go to the mosques or Eidgahs for Eid prayers.



Offering Eid prayer

After the Eid prayers, they wish each other Eid Mubarak.



Wishing Eid Mubarrak

They visit or phone family and friends to wish them Eid Mubarak. They give Edhee to children.



Children receiving Eidi

They eat delicious food and sweets with their family and friends. The Eid celebrations usually continue for three days.



A family enjoying a meal on Eid

ACTIVITY

1. Write five (5) or more sentences to describe how you celebrate a religious festival.

Eid-ul-Azha

Eid-ul-Azha is the Feast of sacrifice. Muslims sacrifice animals to recall the sacrifice of Hazrat Ibrahim (AS) for Allah. Eid-ul-Azha is celebrated on the 10th of Zil Hajj.

On Eid-ul-Azha, Muslims go to mosques or Eidgahs to offer Eid prayers. They then sacrifice animals like goats, buffaloes, cows, sheep or camels. The meat of the sacrificed animals is shared among the poor, friends and relatives.



Muslims offering Eid Prayer.



Maveshi mandi



Meat of the sacrificed animal being prepared for sharing

END OF UNIT 1: EXERCISE

1. Draw a picture of the blessings Almighty Allah has given you. Colour it.



2. Fill in the boxes with the blessings that Almighty Allah has given you. The first one has been done for you.





Food		

These are a few of the blessings that we have to thank Almighty Allah for.

3. Fill in the blanks.
 - (i) Easter is celebrated by _____
 - (ii) At the end of the fasting month of Ramzan, Muslims celebrate _____
 - (iii) Eid-ul-Azha is celebrated on the 10th day of the Islamic month of _____
 - (iv) Hindus celebrate Holi and _____
 - (v) Eid-ul-Azha is also called the _____
 - (vi) Jews celebrate _____ and _____

- (vii) Muslims sacrifice animals like goats, cows, sheep or camels on _____
- (viii) The special sweet dish eaten and served to guests on Eid-ul-Fitr is _____
- (ix) The religious festival to celebrate the birth of Jesus (AS) is _____
- (x) Diwali is celebrated by _____

4. The pictures of festivals of different religions are given in column A. In column B write the name of the festival. In column C write the religious group that celebrates it.

<u>Column A</u> Pictures of festivals	<u>Column B</u> Names of festivals	<u>Column C</u> Name of Religious Group
		
		
		
		

5. a) Find out and list some cultural festivals celebrated in your village/city.

(i) _____ (ii) _____ (iii) _____

b) Find out from someone about one of the above cultural festivals. Ask him/her the following questions and write the answers in the given spaces.

(i) Name a cultural festival which is celebrated _____

(ii) When is it celebrated? _____

(iii) Why is it celebrated? _____

(iv) What do you do on that special day? _____

Teacher's Note Cultural festivals include the celebration of Urs of saints Hazrat Shah Abdul Latif Bhittai, Hazrat Lal Shahbaz Qalandar and Hazrat Sachal Sarmast, Horse and Cattle show, Mango Festival, Sindhi Culture day (*Topi Ajrak day*), Nauroze and Rakhi bandhan.

Unit 2: Our Country

Students Learning Outcomes (SLOs)

By the end of this unit students will be able to:

Chapter 1: Our Country Pakistan

- Recognize the map of Pakistan.
- Name the four provinces of Pakistan.

Chapter 2: Our Flag

- Recognize the significance of the national flag.
- Draw the flag of Pakistan.
- Identify what the colours and symbols on the flag represent.
- Recognize that all countries have a flag.

Chapter 3: Quaid-i-Azam

- Narrate the major events in the life of Quaid-i-Azam (date of birth, founder of Pakistan, few major contributions and the date when he died).

Chapter 4: The Government

- Recognize that just like parents head a family, a principal runs a school; there are people who take responsibility for their village /city.
- Identify some goods and services that government provides for the people of the village/city (water, roads, electricity, education and hospital).
- List three rights they have (education, play, healthcare).

CHAPTER 1

OUR COUNTRY PAKISTAN

The name of our country is Pakistan. Pakistan came into being on 14th August 1947. The capital of Pakistan is Islamabad. Pakistan has four provinces. They are :

1. Sindh
2. Punjab
3. Khyber Pakhtunkhwa (KPK)
4. Balochistan

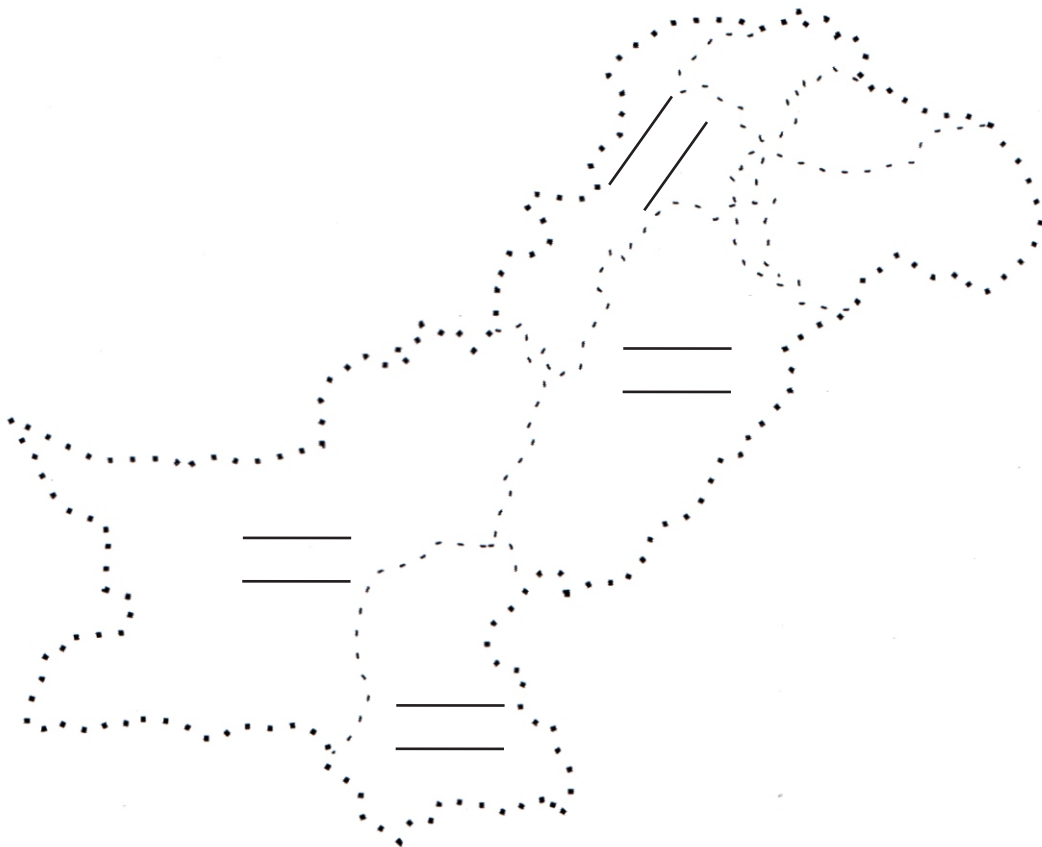
Look at the map of Pakistan below, you can see the provinces:



Teacher's Note Teach the students the capital cities of the provinces of Pakistan and the languages spoken in them. Explain that Gilgit Baltistan is a part of Pakistan.

ACTIVITY

1. Join the dots to make the map of Pakistan. Write the name of the provinces and their capital cities in the space provided.



CHAPTER 2

OUR FLAG

Look at the flag of Pakistan.

The colors of the flag are green and white.

What do the colours show?

The green colour shows prosperity and the Muslim majority. The white colour shows peace and minority.

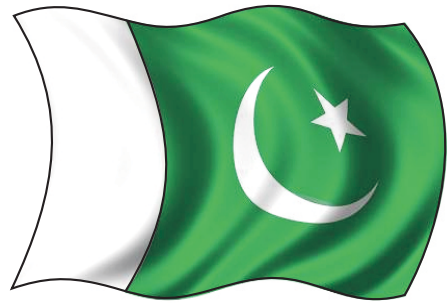
The symbols on the flag are the crescent and star.

What do the symbols show?

The crescent shows progress.

The star shows light and knowledge.

The flag shows the identity of the country.



The flag of Pakistan

ACTIVITY

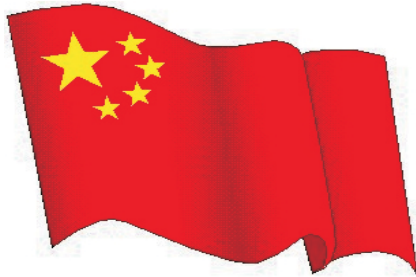
1. Draw the flag of Pakistan and colour it.



Do you know?

*The flag of Pakistan
was designed by
Amiruddin Kidwai.*

Like Pakistan all countries have their own flags.
The flags of our neighboring countries are given below.



China



India



Iran



Afghanistan

3. Complete the table:

Name of the neighbouring country	Name the colours of the flag	Draw the symbols

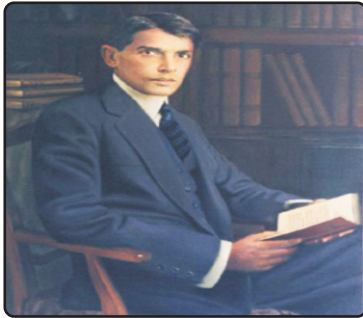
Teacher's Note Talk to the students about what the colours and symbols of the flags given above show.

CHAPTER 3

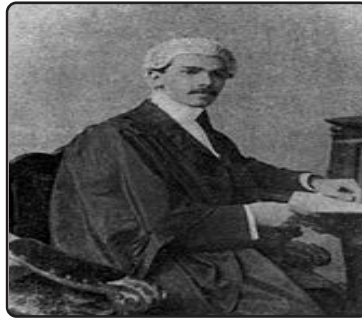
QUAID-I-AZAM

Quaid-i-Azam Mohammad Ali Jinnah is the founder of Pakistan. He was born on 25th December, 1876 in Karachi.

He went to school in Karachi. After completing school he went to England to study law. He became a lawyer.



Quaid-i-Azam as a student



Quaid-i-Azam as a lawyer



Quaid-i-Azam as a leader of Muslim League

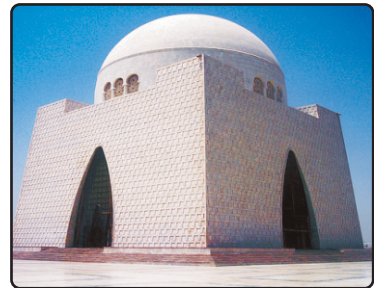
When he returned home, he joined the struggle for freedom from British rule. Later on, he led the struggle for Pakistan.



Quaid-i-Azam meeting with the British



Quaid-i-Azam taking the Oath of Governor General



The Tomb of Quaid-i-Azam

He worked very hard with others to make Pakistan. Pakistan came into being on 14th August, 1947. He was the first Governor General of Pakistan. He died on 11th September, 1948. His tomb is in Karachi.

ACTIVITY

Make a fact file on Quaid-i-Azam Mohammad Ali Jinnah by completing the sentences.

Name _____

Date of birth _____

Birth of place _____

Profession _____

Achievements _____

Date when he died _____

Place where he is buried _____

CHAPTER 4

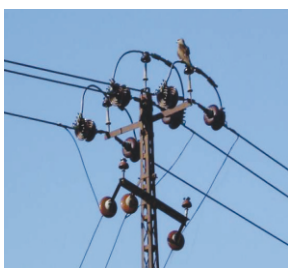
THE GOVERNMENT

Who takes care of everything for your family? Your mother and father does. Like your family a group of elected people look-after everything for the country. This group of people is called the government.

The government works for the good of all the people of the country. It provides them their basic needs like education and health care.



Government school



Electric pole for electricity



Railway station



A road under construction

It ensures the supply of clean water, gas and electricity. It builds roads, railway stations and airports. It makes sure that the life and property of people are safe.

ACTIVITY

1. Answer the following questions:

(i) What is a government?

(ii) List three responsibilities of a government.

- _____
- _____
- _____

(iii) What responsibilities do you have towards your country?

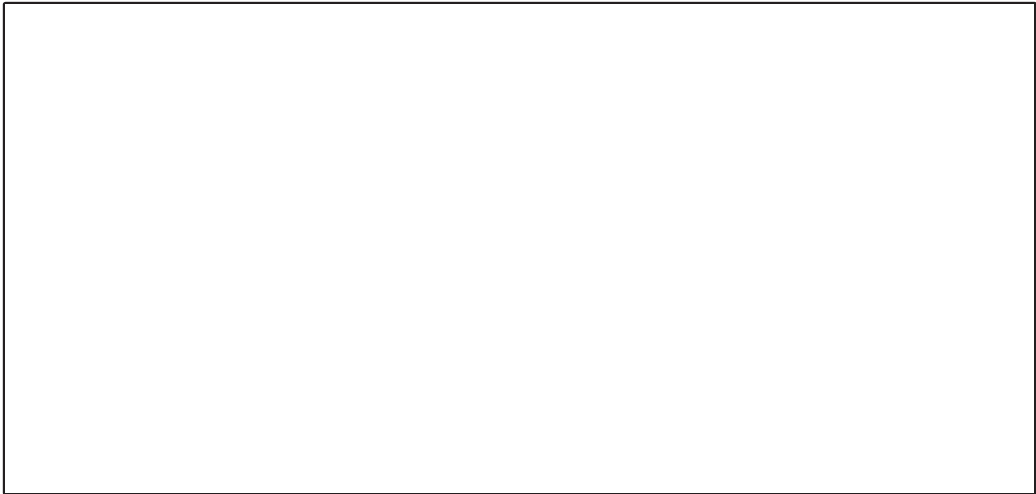
(i) _____ (ii) _____ (iii) _____

Teacher's Note Expected answers to question iii are: going to school and studying hard, keep your locality / school / home / park clean, obey traffic rules, etc.

END OF UNIT 2: EXERCISE

ACTIVITY

1. Draw and the colour the flag of Pakistan.



2. Fill in the blanks (keep the flag of Pakistan in mind).
 - (i) The green colour shows _____ and the prosperity _____.
 - (ii) The white colour shows _____ and _____ .
 - (iii) The crescent symbols shows _____ .
 - (iv) The star symbols shows _____ and _____ .
3. Answers the following questions.
 - (i) What is the name of our country?

 - (ii) Name the capital of Pakistan.

(iii) What is the national language of Pakistan?

(iv) Which province do you live in?

(v) Name the capital city of the province you live in.

(vi) How many different languages can you speak?

(vii) Who is the founder of Pakistan?

4. The names of the provinces of Pakistan are given in column A. Write the names of their capital cities in column B and the languages spoken in column C. Complete the table.

Column A Province	Column B Capital City	Column C Language
Sindh		
Punjab		
Khyber Pakhtunkhwa		
Balochistan		

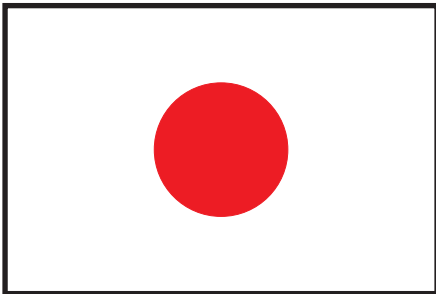
5. Look at the flags, identify the colours and symbols of the flag and fill in the blanks. Find out the name of the country.



Name of the country _____

Colour of the flag _____

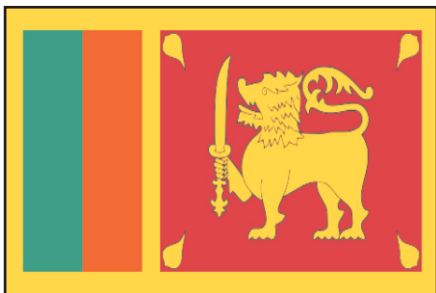
Symbol on the flag _____



Name of the country _____

Colour of the flag _____

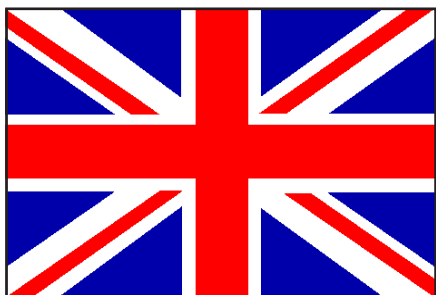
Symbol on the flag _____



Name of the country _____

Colour of the flag _____

Symbol on the flag _____



Name of the country _____

Colour of the flag _____

Symbol on the flag _____

Answers are: Saudia Arabia, Japan, Sri Lanka and United Kingdom.

Unit 3: Villages and Cities

Students Learning Outcomes (SLOs)

By the end of this unit students will be able to:

Chapter 1: Village Life

- Recognize that the people of Pakistan live in villages.
- Identify key characteristics of a village (buildings, facilities, noise and the work people do).
- Describe a day in the life of villagers (male and female).

Chapter 2: How Things have Changed Over time in a Village

- Conduct an inquiry into the ways in which their village / city has changed over time (from elders, books, and other sources) and present findings orally.
- Construct a pictorial timeline of key events in their village / city.
- Identify key persons in the history of their village / city.
- Identify key persons in the history of their city / village (political, social and cultural).
- Recognized good character and personal virtue in key persons in the history of their village / city.

Chapter 3: City Life

- Construct a pictorial timeline of key events in their village / city.
- Identify key persons in the history of their village / city.
- Identify key persons in the history of their city / village (political, social and cultural).
- Recognized good character and personal virtue in key persons in the history of their village / city.

Chapter 4: The Work People Do

- List some of the common vocations / professions of a village / city (cobbler, musician, tailor, butcher etc).

Chapter 5: Caring for Each Other

- List the things they share with others (toys with friends etc).
- Identify from given pictures and stories the way in which people help each other (at home, in classroom in village / city).
- Narrate an incident when they helped someone by sharing food, toys books, etc.

CHAPTER 1

VILLAGE LIFE

Most of the people of Pakistan live in villages. In a village there are only a few houses. Most of the land is used for farming.

In most villages people live in small mud houses with roofs made of hay. Now a days, some live in houses made of bricks.



Houses made of mud with hay on top



Houses made of bricks

Most of the village people are farmers. They grow crops and raise animals.



Crops being grown



Animals being raised on a farm

They use some of the crops as food. They use some of the animals in farming. They sell most of the crops and animals in the market to earn a living.

Some farmers use oxen. Others use tractors to plough the land and get it ready to grow crops.



A farmer using oxen to plough the land



A farmer using a tractor to plough the land

They plant crops and take care of them.



Farmers are transplanting rice



Farmers are sowing seed



A farmer is taking care of the crop



Water is being supplied to the field

When the crops are ready, men and women work together to harvest the crop. Some farmers harvest the crop by using their hands and others use machines.



Farmers are thrashing the crop by hand



Farmers are using a thresher to harvest the crop

They milk the cows, buffaloes and goats and sell the milk in the market.



A farmer milking a buffalo



Truck carrying milk

Donkeys, camels, bullocks and trucks help transport the farm products to the market for sale.



A bullock cart and truck transporting the farm products to the market

ACTIVITY

Find out about a day in a woman's and man's a life in the village.
Then complete the sentences given below.

a) A day in the life of a woman in a village

- (i) She gets up at _____
- (ii) She has _____ to eat at breakfast.
- (iii) In the morning she _____
- (iv) She eats lunch at _____
- (v) After lunch she _____
- (vi) In the evening she _____
- (vii) She goes to bed at _____

b) A day in the life of a man in a village

- (i) He gets up at _____
- (ii) He has _____ to eat at breakfast.
- (iii) In the morning he _____
- (iv) He eats lunch at _____
- (v) After lunch he _____
- (vi) In the evening he _____
- (vii) He gos to bed at _____

Farmers also need people to fix their tools and machines, teachers to teach their children, doctors to take care of them when they are sick and shopkeepers to sell goods. In the towns next to villages there are workshops, schools, health centres and small markets to take care of these needs.



A carpenter fixes some of the tools for a farmer



A mechanic repairs farm machines



A teacher teaches children to write on a takhti



A health care worker examines a patient

ACTIVITY

Why do the villagers go to the town?

Ans. The villagers go to the town

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____
- (v) _____

CHAPTER 2

HOW THINGS HAVE CHANGED OVER TIME IN A VILLAGE

The grandmother of Ali and Sana is telling them a story about when she was young.



Grandmother telling the story to the children

I was one of the few lucky children because I went to school. Our school was in the town next to our village. Each day, I had to walk very far to get to school. My school was a small one-room building. Children from all the nearby villages came to this school.



An old school

Now there is a two room primary school in our village and most of the children go to this school. When they pass primary school they go by van to a secondary school in the town.



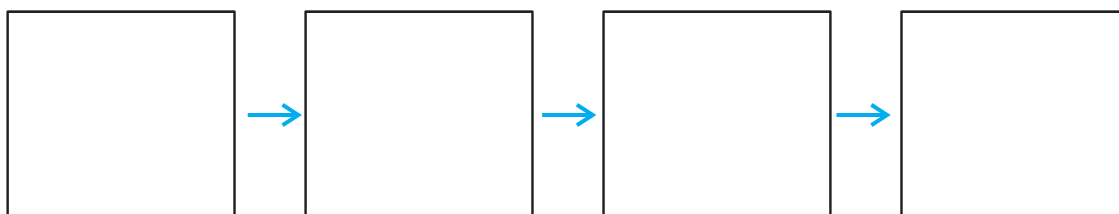
A new school

ACTIVITY

1. How has the village school changed over time?

	In the past	Now a days
How many children went to school?		
How did the children go to school?		
How many rooms did the school have?		
Where was the school?		

2. Find out from your parents how means of transport have changed in your village. Draw a picture to show the changes.



3. Read chapter 1 and complete the table to show how village life is changing.

	In the past	Now a days
Ploughing the land		
Planting the crop		
Watering the crop		
Harvesting the crop		
Transporting farm products to market		

Teacher's Note If students cannot draw pictures then cut and paste in the given space.

CHAPTER 1

VILLAGE LIFE

Most of the people of Pakistan live in villages. In a village there are only a few houses. Most of the land is used for farming.

In most villages people live in small mud houses with roofs made of hay. Now a days, some live in houses made of bricks.



Houses made of mud with hay on top



Houses made of brick

Most of the village people are farmers. They grow crops and raise animals.



Crops being grown



Animals being raised on a farm

4. Write the names of water sources in the blank spaces given under each picture.



5. Find out the ways in which people waste water. Write what they can do instead.

- (i) _____
- (ii) _____
- (iii) _____
- (iv) _____
- (v) _____

Unit 8: Plants their Parts and Functions

Students Learning Outcomes (SLOs)

By the end of this unit students will be able to:

Chapter 1: Plants Around Us

- Name the plants that grow in their surroundings.
- Identify major parts of a plant.

Chapter 2: Plants and Their Functions

- List the functions of the root, leaf, and flower.
- Identify the different kinds of leaves found around them.
- Identify the roots that are eaten by people.
- Name the plants around them which have flowers and which do not have flowers.
- Identify that soil and water is needed to grow a plant.
- Identify the ways in which plants are used(food, clothing, shelter etc).

CHAPTER 1

PLANTS AROUND US

You have learned in class one that plants grow all around us. Can you name some of the plants that grow around you, at home, at school, in your neighborhood park or on your farm?

Plants are one of the many beautiful gifts of nature. They are very useful for us. We eat some plants and we use some plants to make other things.

ACTIVITIES

1. Write the names of three (3) plants around you.

(i) _____ (ii) _____ (iii) _____

2. Write the names of the plants in given spaces.



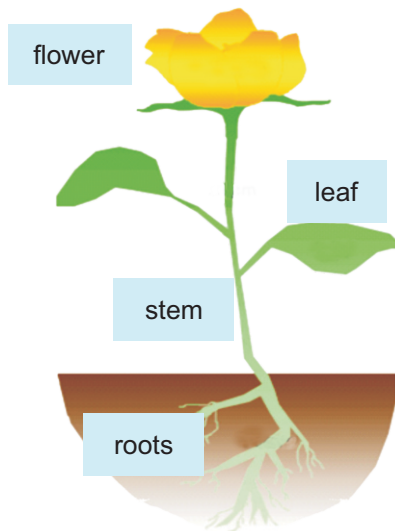
CHAPTER 2

PARTS OF PLANTS AND THEIR FUNCTIONS

You have learnt in class one that plants have many parts.

Can you name the parts of a plant?

Yes, plants have flowers, leaves, stems and roots.



Each part of the plant helps the plant in some way. In the next few pages you will learn how each part of the plant helps it grow.

ACTIVITY

Draw a plant. Label the parts of a plant and colour it.



The Root

All plants have roots. The roots grow down into the soil.

They have many small branches.

The functions of the root are as follows:

1. Roots help to keep the plant fixed in the same place.



ACTIVITY

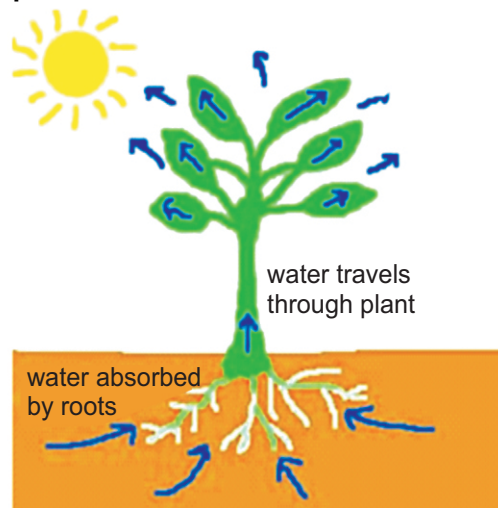
Bring in a plant with its roots intact. Observe the roots. Shake off most of the dirt. Observe the roots again. Answer the questions.

- (I) What did you observe? _____
- (II) Why is there dirt on the roots? _____
- (III) Why do roots grow underground? _____
- (IV) Why do roots have small branches? _____

Teacher's Note Explain to students that roots are underground. They spread out so as to hold the plant firmly in its place. Explain how roots work sucking up water and nutrients from the ground and giving it to the other parts of the plant.

Expected answer for activity; The water will move up the paper towel.

2. Roots take water and nutrients from the soil and give it to the whole plant.



ACTIVITY

Things Needed

- Strip of cotton cloth or paper towel
- A cup of water

Procedure:

Fill a cup with water. Dip one end of the strip of cotton cloth or paper towel in the water. Observe what happens.

What did you observe happen? _____

3. Some roots store food in them. We eat some of the roots that store food in them such as carrot, raddish and *arvi*.



Raddish



Carrot



Arvi

ACTIVITIES

1. Fill in the blanks .Use the word box to help you.

food grow roots support

- (i) Roots _____ into the soil.
- (ii) Water and nutrients are absorbed by the ____ of a plant.
- (iii) We eat some roots as _____.
- (iv) Roots give _____ to the plant to stand straight.

2. Draw three roots that you eat, name and colour them.

--	--	--

The Stem

The stem is the part of the plant that is between the roots and the leaves.

The functions of the stem are as follows:



- 1. The stem keeps the plant standing straight.
- 2. The stem supports branches, leaves, flowers and fruits.
- 3. It takes water from the roots and gives it to the leaves to make food.
- 4. Some plants store food in their stems. We eat the stems of many plants such as sugarcane.

Teacher's Note Explain to the students that it is the stem's job to carry water to the leaves and flowers of plants. It works like a straw, sucking the water up.

ACTIVITY

Things needed:

- A glass
- lettuce leaves/cabbage with stem
- Food colour (red or blue, ink can also be used)
- Water



Procedure:

Half fill a glass with water. Place a lettuce leaf (with stem) in a glass of water. Add the food colour to the water and mark the water level on the glass. Over the next three days observe what happens to the lettuce leaf and the water. Write your observations in the table below.

Day	Level of water in the glass	Colour of the lettuce leaf
1.		
2.		
3.		

Answer the following questions.

(i) What was the colour of the lettuce leaf in the beginning?

(ii) What was the colour of the lettuce leaf at the end of the experiment?

(iii) Why did the colour of the lettuce leaf change?

(iv) What is the function of the stem?

The Leaf

Leaves grow on the stem and its branches. Some leaves are simple, that is, a single leaf is attached to the stem. Some leaves are compound, that is, many leaves are attached to a stem.



Simple leaf



Compound leaf

Leaves are mostly green in colour. Some leaves stay green all year round. They are evergreen. Others turn brown and then fall off the stem.

Leaves are of many different shapes and sizes. Some leaves are needle like. These leaves are evergreen. Some leaves are plain and some leaves have margins (teeth).



Needle like leaf



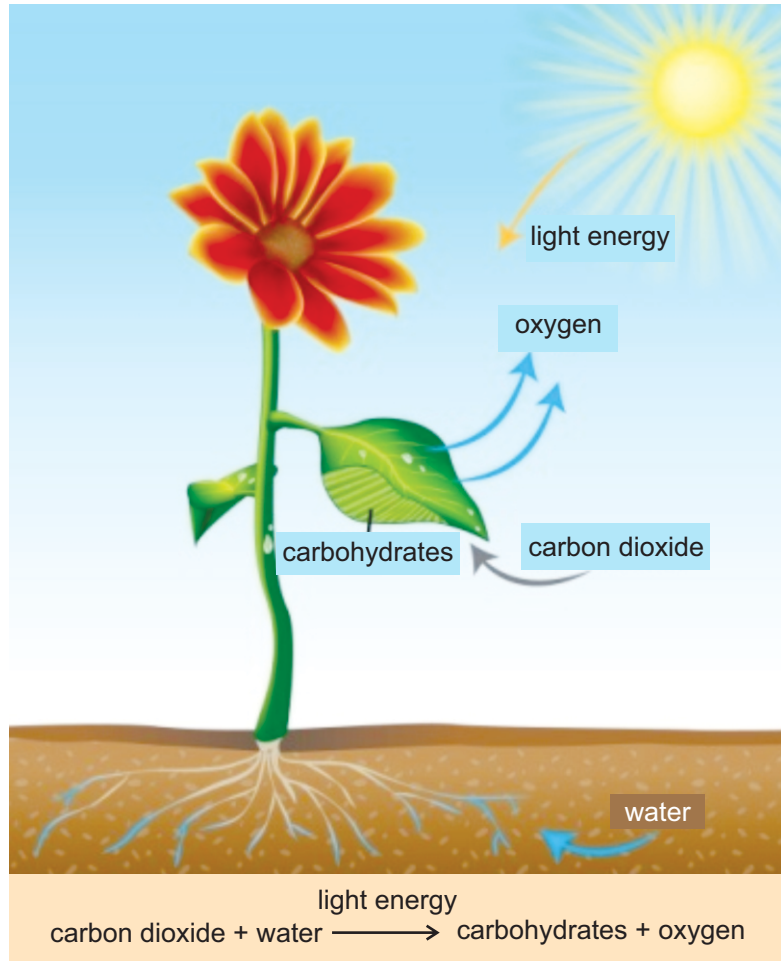
Plain leaf



Margins (Teeth leaf)

The functions of the leaves are as follows:

1. The leaves make the food for the plant. They use water, carbon dioxide from the air and sunlight to make the food.



2. We eat the leaves of some plants such as spinach, mint, coriander and *methi*.



Spinach



Mint










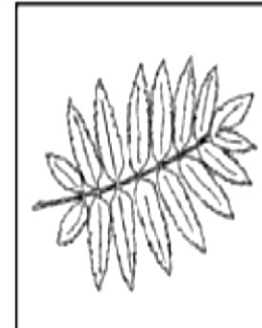

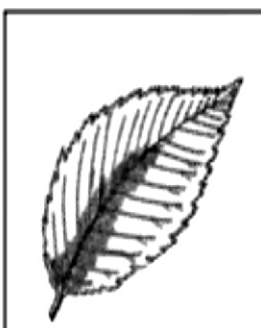
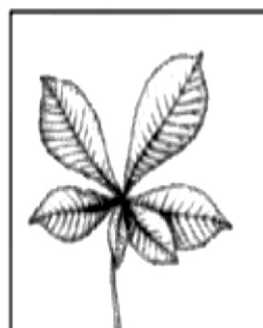

Coriander



Methi

ACTIVITY

In the table below, different types of leaves are given. Put a tick (✓) on number 1 for simple leaves, on number 2 for compound leaves, number 3 for needle leaves.

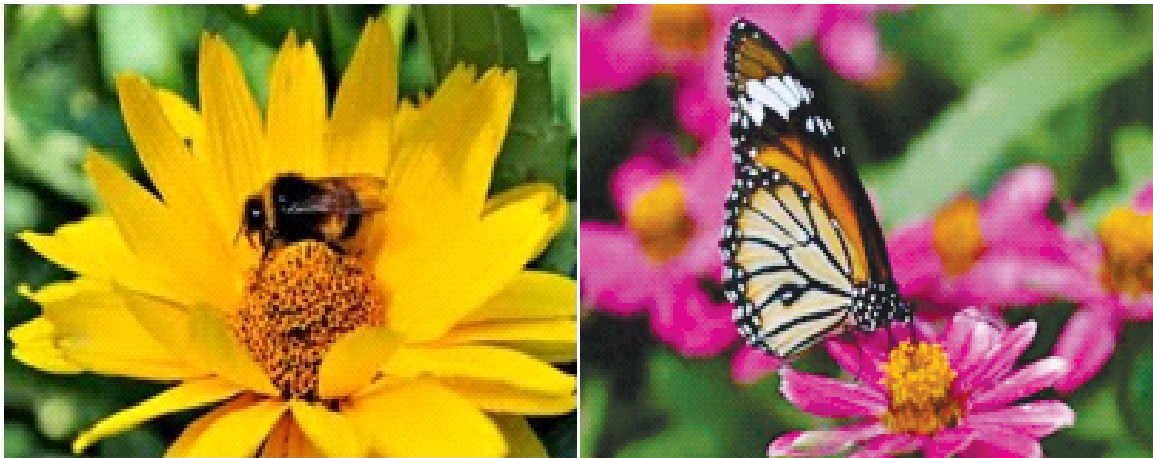
			
1 2 3	1 2 3	1 2 3	1 2 3
			
1 2 3	1 2 3	1 2 3	1 2 3
			
1 2 3	1 2 3	1 2 3	1 2 3

Flowers

Flowers are the colourful and beautiful part of the plants.

The functions of flowers are as follows.

1. The colourful and pleasant smell of flowers attracts butterflies and bees to plants. The butterflies and bees help in pollination.



A butterfly and a honeybee on flowers

2. Flowers also make the many fruits that we eat such as mangoes and oranges. Seeds are present in the fruit. New plants grow from the seeds.



Mango tree with flower

Flowers with fruit

Mango fruit

Mango seed

Teacher's Note Explain why the flowers are brightly coloured. Show the students where to find the pollen and let them observe it with a magnifying glass. Explain how they play a role in pollination. Tell them about pollination and the flower's job of making seeds.

3. Flowers make our environment beautiful.



Flowering and non-flowering plants

Not all the plants have flowers. The plants that produce flowers and seeds are called flowering plants.



The plants that do not produce flowers and seeds are called non-flowering plants.



ACTIVITIES

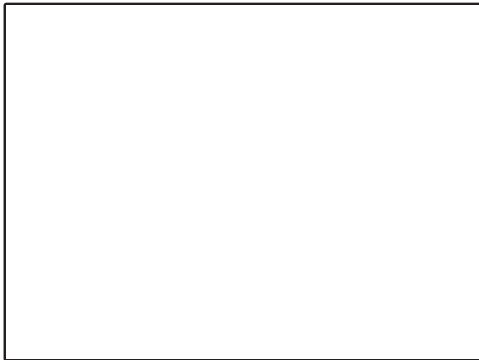
1. Answer the following questions.

(i) Why are the flowers brightly colored?

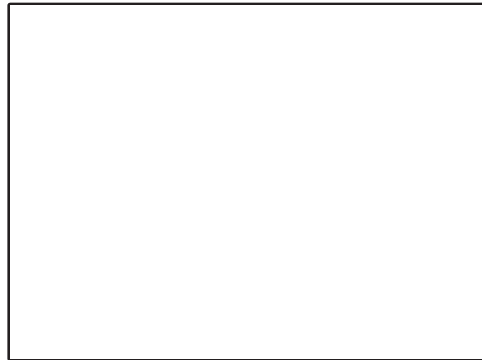
(ii) Did you see any insect, butterflies or bees on the flowers?
What were the insects doing?

(iii) What are the main functions of flowers?

2. Draw how a flower becomes a fruit with seeds and seeds grow into a new plant in the given box.



Guava flower



Guava fruit



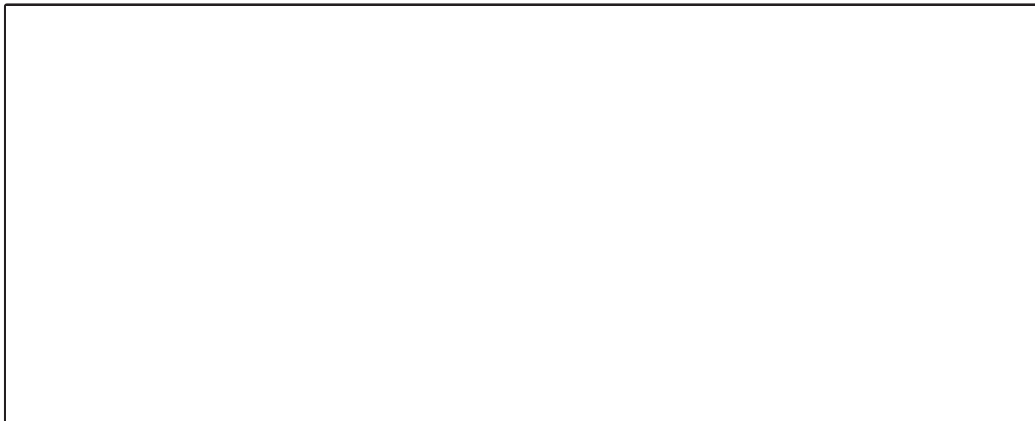
Guava seed



A new guava plant

END OF UNIT 8: EXERCISES

1a. Draw a plant. Colour and label its parts.



b. Write the things that a plant needs to grow.

(i) _____

(ii) _____

(iii) _____

(iv) _____

2. Fill in the blanks .Use the word box to help you.

flower ,fruit , trunk, water, food

(i) Roots take in _____from the soil.

(ii) The stem of a tree is called the_____.

(iii) The colorful part of a plant is the_____.

(iv) Leaves make _____for the plants.

(v) Flowers make _____.

2. Look at the pictures and answer the questions.



(i) Write the names of the plants.

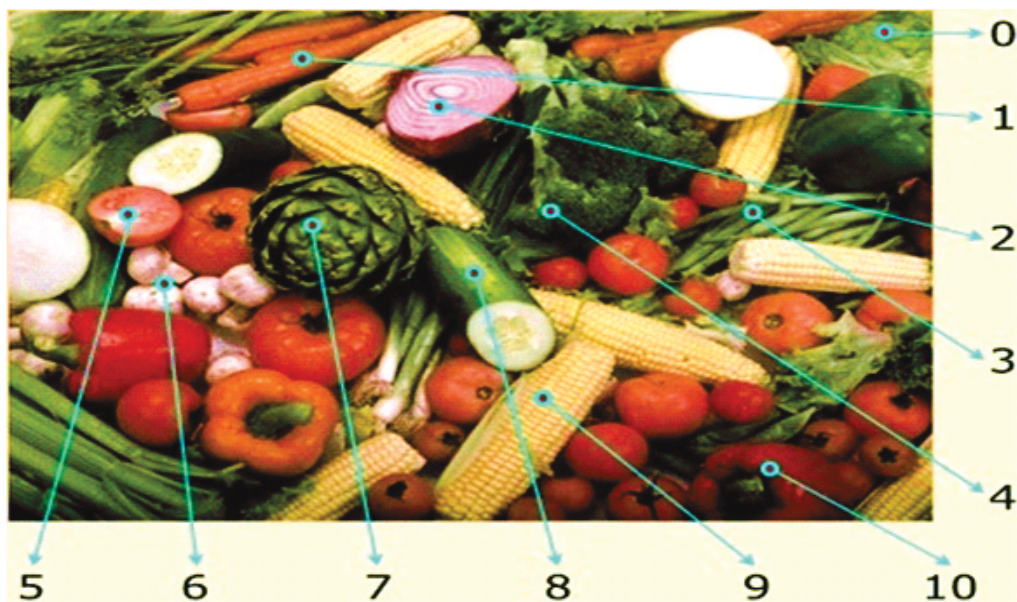
1. _____

2. _____

(ii) In what ways are these plants similar?

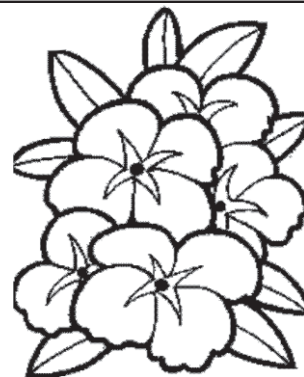
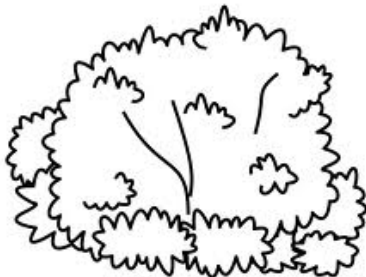
iii) What are the differences between these two plants?
(Find as many differences as you can. Look at the leaves,
stem, branches, flowers and fruits (if any).)

- 3.a Look at the picture below. Some vegetables are given numbers from 0 to 10. Identify which part of the plant each vegetable is. Complete the table below.



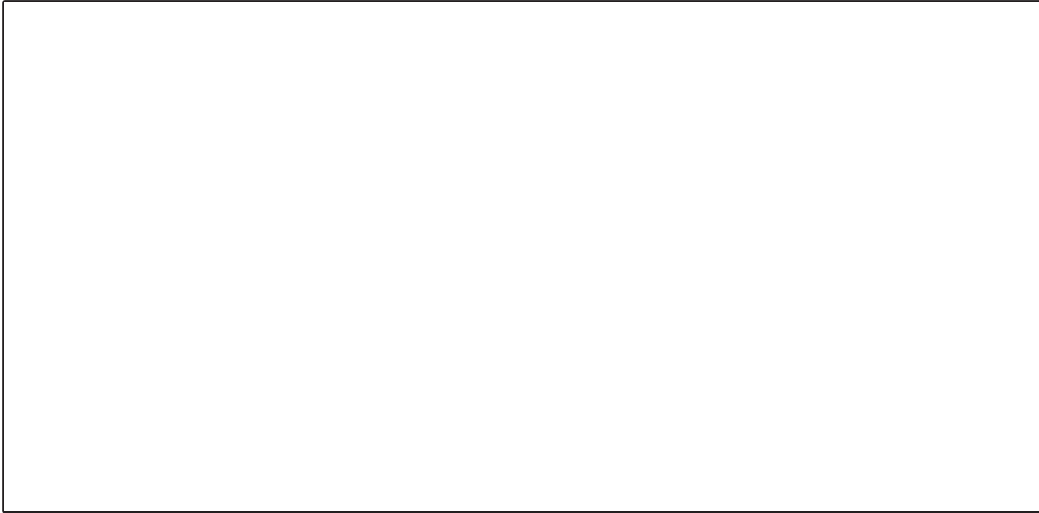
No	Name of the vegetable	Part of plant
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

- b. Pictures of some plants are given. Write in the given space flowering or non flowering.



EXTENSION ACTIVITIES

1. Draw your favorite fruit with seed.



2. List the ways plants are useful for us? Use the word box help you.

Clean air, food, shelter for birds, shade for us, wood, beautiful environment, furniture, paper, cloth, medicine, fuel to burn, cotton.

Plants give	We make from plants

Teacher's Note Explain more clearly the importance of plants and difference between what we get from plants and what we make from plants.

3. Write the names of two fruit you eat that have seeds and of two fruit which have no seeds.

a. Two fruits with seeds:

(i) _____ (ii) _____

b. Two fruits without seeds:

(i) _____ (ii) _____

4. Take two leafy plants. Carefully remove the leaves from one plant. Place both plants in a sunny spot and water and care for them the same way over the next few weeks. If the plant without leaves grows new ones, remove them too. Observe what happens to the two plants and write it down.

Yes, without the leaves, the plant can't make food and dies.